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SERIAL NUMBER	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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08/186,469 01/26/94 ALMEIDA

A 034367

LEE, K  
EXAMINER

34M1/0825

SUGHRUE, MION, ZINN, MACPEAK & SEAS  
2100 PENNSYLVANIA AVE., N.W.  
WASHINGTON, DC 20037

ART UNIT PAPER NUMBER

3407

DATE MAILED: 08/25/95

This is a communication from the examiner in charge of your application.  
COMMISSIONER OF PATENTS AND TRADEMARKS

☒ This application has been examined ☒ Responsive to communication filed on May 22, 1995 ☐ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), \_\_\_\_\_ days from the date of this letter.  
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

**Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:**

- ☒ Notice of References Cited by Examiner, PTO-892.
- ☐ Notice of Draftsman's Patent Drawing Review, PTO-948.
- ☐ Notice of Art Cited by Applicant, PTO-1449.
- ☐ Notice of Informal Patent Application, PTO-152.
- ☐ Information on How to Effect Drawing Changes, PTO-1474.
- ☐

**Part II SUMMARY OF ACTION**

1. ☒ Claim 2 is ~~are~~ pending in the application.

Of the above, claims \_\_\_\_\_ are withdrawn from consideration.

2. ☐ Claims \_\_\_\_\_ have been cancelled.

3. ☐ Claims \_\_\_\_\_ are allowed.

4. ☒ Claim 2 is ~~are~~ rejected.

5. ☐ Claims \_\_\_\_\_ are objected to.

6. ☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

7. ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.

8. ☐ Formal drawings are required in response to this Office action.

9. ☐ The corrected or substitute drawings have been received on \_\_\_\_\_. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).

10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on \_\_\_\_\_, has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).

11. ☒ The proposed drawing correction, filed May 22, 1995, has been ☒ approved; ☐ disapproved (see explanation).

12. ☐ Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. \_\_\_\_\_; filed on \_\_\_\_\_.

13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

14. ☐ Other

**EXAMINER'S ACTION**

**PART III DETAILED ACTION**

1) Applicant's arguments with respect to claim 2 presented in the amendment filed May 22, 1995 have been considered but are deemed to be moot in view of the new grounds of rejection.

2) Claim 2 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 2 incorrectly recites that the invention pertains to "a gas-lift valve" consisting of a "valve seat" mounted in the housing. The element (7) illustrated in Figure 4 to which the claim pertains, however, is not readable as a valve since the fluid flow is not completely cut off or obstructed, i.e., no valve member engages the valve seat. As applicant states in the fourth paragraph of page 2 of the amendment filed May 22, the device "is not intended to control the flow of gas in an on-off manner through the orifice since the valve works at all times in the 'open' position." Line 4 of the claim recites that the flow through the seat passage is continuously open. Since flow through the element (7) is open at all times, the element (7) is not a valve but rather a flow restrictor having a central path.

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3) The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Claim 2 is rejected under 35 U.S.C. § 103 as being unpatentable over Kerr, noting Figure 2. As far as the claim is understood in view of the above paragraph, the patent to Kerr is readable on the above claim as disclosing a flow restrictor consisting of a seat member (25) having a continuously open passage. The passage consists of a curved inlet portion, adjacent to reference numeral (24), defining a nozzle, a smooth, outwardly tapered conical shaped outlet portion, adjacent to reference numeral (23), and a smooth portion formed between the inlet and outlet portions. The intermediate portion is readable as being straight, similar to that of the straight portion illustrated in Figure 4 of the invention. It would have been a matter of expedient design to have the restrictor control the flow of gas

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within an oil-well. The recitation that the "valve" is "for use in oil-wells" is considered a suggested use.

Claim 2 is rejected under 35 U.S.C. § 103 as being unpatentable over applicant's admission of Figure 2 representing prior art in view of Kerr. Applicant admits on page 2 of the specification that Figure 2 represents prior art. Figure 2 is readable as illustrating a restrictor (3) for use in a gas oil-well. The restrictor (2) of the prior art reference has a series of sharp edges and corners through which the gas flow through the passage (4) must pass causing sharp changes in the direction of fluid flow. The restrictor lacks having a curved inlet and outlet portion and a straight intermediate portion. The patent to Kerr teaches providing a restrictor with a curved inlet portion, a smooth, straight intermediate portion, and a smooth, outwardly tapered conical shaped outlet portion. Kerr teaches that these portions of the restrictor decrease the resistance to fluid flow through the passage as compared to a restrictor which causes sharp changes in the directions of the flow, col. 2, lines 31-35. In view of the teaching of Kerr, it would have been obvious to one of ordinary skill in the art at the time of the invention to have provided the restrictor of the prior art figure 2 to have a curved inlet, a smooth, straight intermediate portion and a smooth, outwardly tapered conical shaped outlet portion to provide a smooth passage through the restrictor with no sharp

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edges or corners to reduce the resistance to fluid flow through the restrictor.

Claim 2 is rejected under 35 U.S.C. § 103 as being unpatentable over Khuzaie. The patent to Khuzaie is readable on the above claim as understood to disclose a restrictor (31) having a continuously open passage, the passage consisting of a curved inlet portion (33) defining a nozzle, a smooth outwardly tapered conical shaped outlet portion (36), and a smooth, straight intermediate portion (34) defining a main restriction to the fluid flow. It would have been a matter of expedient design choice to use the restrictor within a gas oil-well to restrict the flow of gas through the oil-well.

4) The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The patents to Clark and Moseley, Jr. are cited for the additional showing of flow restrictors having a curved inlet, a smooth, straight intermediate portion, and a smooth, outwardly tapered conical shaped outlet portion.

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5) Any inquiry concerning this communication should be directed to KEVIN LEE at telephone number (703) 308-1025.

The Group 3400 fax number is (703) 305-3463.

AUGUST 24, 1995

*Kevin Lee*  
KEVIN LEE  
PATENT EXAMINER  
GROUP 3400